

**FACT SHEET FOR STATE WASTE DISCHARGE
PERMIT NO. ST-9205**

WATTS BROTHERS FROZEN FOODS, LLC.

SUMMARY

Watts Brothers Frozen Foods, LLC. is seeking a State Waste Discharge Permit for its facility near Paterson, WA. The permit will regulate wastewater discharges to the company's land treatment system. The company has been operating under a temporary State Waste Discharge Permit since 1997.

The operation grows and processes various vegetables for the frozen food market. Watts Brothers irrigates over 20,000 acres under center-pivot irrigation on the south-facing slopes of the Columbia River valley. A large proportion of the acres are farmed organically. Six center-pivots, which irrigate 711 acres of crops, have been utilized to distribute wastewater from the vegetable processing operation. The wastewater contains high concentrations of organic matter derived from vegetable processing.

Vadose zone sampling in 2003 of wastewater leachate in lysimeters in the sprayfields indicate that liquid vegetable processing waste may not be getting adequate treatment. Therefore the permit requires the submittal of an Engineering Report to determine all known, available, and reasonable methods of prevention, control and treatment of wastewater in order to assure protection of State ground water. Contingent with the Engineering Report, the permit requires a Ground Water Quality Evaluation to assure the protection of State ground water quality.

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INTRODUCTION

This fact sheet is a companion document to the State Waste Discharge Permit No. ST-9205. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to waters of the State of Washington. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.162) requires that a permit be issued before discharge of wastewater to waters of the State is allowed. Regulations adopted by the State include procedures for issuing permits (Chapter 173-216 WAC), and water quality criteria for ground waters (Chapter 173-200 WAC). They also establish requirements which are to be included in the permit.

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant	Watts Brothers Frozen Foods, LLC.
Facility Name and Address	Watts Brothers Frozen Foods, LLC. Highway 14, 2 miles East of Paterson Patterson, WA 99345
Type of Facility	Vegetable Processing
Type of Treatment	Land Application
Discharge Location	Latitude: 45° 56' 35" N Longitude: 119° 33' 13" W
Legal Description of Application Area	Section, Township, Range E. W. M. Latitude: 45° 57' 18" N Longitude: 119° 33' 34" W
Contact at Facility	Name: Kevin Tibbett Telephone #: 509-875-2423

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

History

Watts Brothers Farms began operations in 1989 on irrigated land near Paterson, WA. The farm's irrigated land is on southward facing terraces, just north of the Columbia River. Crop processing began with the startup of the Watts Brothers Frozen Foods operation in July 1997, on farm property just north of State Highway 14 about 2 miles east of Paterson.

The Permittee's original temporary State wastewater discharge permit became effective July 5, 1997. A second temporary permit became effective July 1, 2002. The permit application and appendices (which include monitoring, reporting, and loading limitations requirements) to the application constituted the terms and conditions of the temporary permit.

Industrial Processes

Approximately 62,500 tons of sweet corn and 3,500 tons of peas are processed each year. The organically raised sweet corn is husked, cut from cob, then blanched and individually quick frozen (IQF). Other organically grown vegetables (peas, carrots, green beans) are also quick frozen after processing. Potatoes are also grown, but these are not raised organically.

Chlorinated river water and/or well water is utilized in the preparing and processing of the vegetables. Wastewater generated during vegetable blanching and chilling, tunnel belt washer processes, and plant sanitation is routed to a floor gutter collection system.

Crop processing wastewater is applied to six sprayfields located north of the processing building. The sprayfields are sometimes double cropped, growing peas early in the growing season, then corn in later months of the growing season. Alfalfa is raised on the sprayfields on an alternating year basis.

Treatment Processes

Wastewater exits the vegetable processing facility through floor gutters and is passed through a Lyco double screen. This screen has slot widths of 0.06 inch inside and 0.02 inch outside. The screened wastewater enters a 20 ft. by 20 ft. by 12 ft. deep (36,000 gallons) settling basin, then flows over a weir to an adjacent 14,000 gallon pump basin. Wastewater in the pump basin is diluted with chlorinated river water at a rate of approximately 700 gpm. A portion of this diluted process water from the pump basin is recycled to the facility gutter system, which facilitates flushing of the gutters. (The exact dilution ratio of process water to chlorinated river water and the rate at which dilute water is returned to the gutters has not been established.) The diluted wastewater is pumped to the sprayfields through a wastewater distribution pipeline.

Corn is husked in a covered area outside and adjacent to the main processing building. The husked vegetative waste byproducts are conveyed to a silage press. The press extrudes wastewater, which is passed through a screen and routed to the initial settling basin. The compressed vegetative byproducts are hauled off site (to Oregon) to be utilized as silage for livestock.

A limited volume of non-contact cooling water and/or cooling tower blowdown water is also discharged to the pump basin. The total volumes of this wastewater stream has not been established.

Sprayfield Distribution System

The sprayfield distribution system consist of six irrigated crop circles, totaling 711 acres. The A-Cluster valve system, located 1/2 mile northwest of the facility, distributes the blended river water and process wastewater to one of five sprayfields (sprayfield #'s 1, 3, 4, 8, and 9). Distribution of wastewater to sprayfield #5 is upstream of the A-Cluster valve system, and is therefore the initial diversion location in the wastewater pipeline.

Wastewater not routed to sprayfield #5 is piped to a final set of wastewater pressure filters which are situated immediately prior to the A-Cluster distribution valves. This is the wastewater's final filtration and is designed to prevent clogging of the sprinkler emitters.

At the A-Cluster, wastewater is further blended with river water at an approximate 1 to 7 ratio. The process wastewater sprayfields are managed through a computer based irrigation scheduling program. Daily irrigation needs are determined from projected evapo-transpiration, based on a Paterson, WA weather station. At least one field is covered by a neutron probe-based irrigation scheduling service which provides a check on irrigation management.

The additional factor of nitrogen timing is incorporated in management decisions of the sprayfields. The goal of nitrogen timing protocols is to effectively optimize nitrogen uptake by the plants. This process minimizes leachate of nitrogen into the ground water. In 1998, total irrigation for the pivots ranged between 25.2 and 37.3 inches, while process water applications accounted for approximately 10 percent of the total.

To date, irrigation water application rates and volumes to the sprayfields have been determined by recording time length of application through a particular irrigation pivot. The flow rate through an irrigation nozzle at a given pressure is a known quantity; therefore the total volume of water applied to a sprayfield can be estimated by recording the length of time the water is pumped through the pivot.

However, the water pressure at a given nozzle is not consistent throughout the entire rotation of the center-pivot. Most of the Watts Brothers sprayfields are not located on flat topography. Therefore, variations in the nozzle's head pressure are caused by changes elevation as the center-pivot rotates around the crop-circle. This results in uneven application rates of wastewater within the sprayfields.

A limited amount of wastewater is diverted to a pond located approximately ¼ mile west of the facility. This pond is currently supporting a community of wetland plants and animals. A section of the hydrogeologic report (S7) shall examine if the pond is protective of the State's ground water quality.

GROUND WATER

The company has an onsite water well utilized for domestic supply. The State of Washington water well report (well log) provides the following details about the well: 1) depth of 470 feet, 2) depth to static water 108 feet, 3) year well completed – 1997, 4) location SW ¼ SW ¼ Sec.3, Twn.5 N, R. 26 E. The well is down-gradient from the sprayfields.

A single analysis of the concentration of nitrate in the Permittee's water well was conducted in September 2004. A reported value was 17 mg/L of nitrate was obtained. The temporary permit required annual sampling of nitrate concentration and conductivity in the water supply well to be conducted. The static elevation of the water supply well was required to be recorded quarterly. A network of lysimeters has been installed in the sprayfields. These lysimeters collect waste water in the vadose zone, which is the area below the root zone and above the saturated ground water layer. As of the date this permit was written, there were at least two lysimeters located in

each sprayfield. Two of the sprayfields (#'s 8 and 9) had three lysimeters. An analysis of vadose zone water is presented later in this fact sheet.

PERMIT STATUS

An application for a permit was submitted to the Department on November 12, 2002 and accepted by the Department on November 20, 2002.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on July 24, 2003. The purpose of the inspection was to discuss with Watts Brothers the wastewater discharge permit issuance procedure, as well as general details relating to wastewater and sprayfield management.

During the history of the previous permit, the Permittee has not remained in compliance based on a failure to submit the required analyses of wastewater, soil, irrigation water supply, water supply well, and crop harvests.

The temporary State Wastewater Discharge permit, issued July 5, 1997, was based on information contained in the application and Engineering Report (specifically Appendices A, B, and C of the 1995 White Shield Engineering Report). The only data the Department has received from the Permittee are wastewater monitoring and flow data from 1997, and a truncated wastewater analysis from August 2000. Also, a truncated data set from 2002 that included flow data, wastewater, and vadose zone analysis was received by the Department in May of 2003.

Appendix B of the 1995 Engineering Report and the revised Attachment B in the 1999 Updated Sprayfield Management Plan set hydraulic, nutrient, and pollutant loading limits to the sprayfields.

The revised 1999 limits are presented in the table below:

Table 1: 1999 Loading Rates

Hydraulic Loading	Maximum Rate
Daily	1.75 inches/day
May	5 inches/acre
June	9 inches/acre
July	10 inches/acre
August	11 inches/acre
September	7 inches/acre
October	7 inches/acre
November	4 inches/acre
Annual Total	40 inches/acre
Pollutant & Nutrient Loading	Maximum Loading Rate
Nitrogen	350 lbs/acre/year
Organic Phosphorus	50 lbs/acre/year
5-day BOD	100 lbs/acre/day
Total Suspended Solids	50 lbs/acre/day

Appendix C of the 1995 White Shield Engineering Report (and Attachment C of the 1999 Updated Sprayfield Management Plan) set forth monitoring, record keeping and reporting requirements for the temporary permit, the Department has not received these data sets consistently or completely.

However, since May 2003, the Permittee has been submitting data as required by the temporary permit.

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the permit application and in 2003 discharge monitoring reports. Wastewater was grab sampled at a port located in the wastewater distribution pipe between the final filtration and the A-Cluster valve system. One part of wastewater is blended with seven parts of river water at the A-Cluster. Since the grab sample location is obtained at a port in the pipe upstream from the A-Cluster, the concentration of pollutants delivered to the sprayfields is approximately 1/7 the concentrations of the grab sampled wastewater.

It should be noted that wastewater is diluted with an un-metered volume of chlorinated river water at the facility's 14,000 gallon pump basin, prior to grab sampling at the A-Cluster. Both

Loading rate data submitted to the Department by the Permittee in 2003 is summarized in Table 2. The data set presents hydraulic, nutrient, and pollutant loading to the sprayfields.

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Table 3 presents the monthly averaged concentration of various constituents in water obtained from lysimeters in the sprayfields in 2003.

Analyte	June	July	August	September
TKN (mg/L)	5.0	4.4	7.9	12.8
TDS (mg/L)	967.0	696.0	530.0	775.8
Conductivity (umho/cm)	1278.0	825.0	725.0	752.0
pH (standard)	7.4	6.9	7.4	6.8
Sodium (mg/L)	32.7	20.1	25.1	23.2
Nitrate (mg/L)	78.4	33.1	8.4	11.1
Potassium (mg/L)	61.1	55.1	43.2	31.1
Ferrous Iron (present/absent)	present	present	present	present
Sulfate (mg/L)	21.3	11.3	11.2	12.7
Chloride (mg/L)	21.4	10.5	13.9	13.6
Alkalinity (mg/L)	261.1	242.6	404.3	260.4
Total Phosphate (mg/L)	0.1	0.1	0.1	0.1
Calcium (mg/L)	129.1	90.1	82.5	80.3
Magnesium (mg/L)	30.0	23.4	21.7	21.3

Table 4: Individual Lysimeter Vadose Zone Sampling– May - Sept. 2003

	Sprayfield Lysimeter Designation								
ANALYTE	1A	1B	4A	5A	5B	8B	8C	9A	9B
TDS mg/L	325.0	561.0	NS ^a	NS	1445.5	416.0	410.0	NS	595.0
Nitrate mg/L	1.5	33.6	38.9	3.6	65.2	11.9	0.7	21.5	31.9
Ferrous Iron mg/L	0.3	0.7	NS	NS	0.0	0.9	0.5	0.3	0.1
^a Not sampled or insufficient sample.									

SOIL CHARACTERIZATION

Table 5 presents the results of soil sampling conducted in May of 2003. The nitrate concentration indicates precursor conditions that may lead to exceedance of State ground water criteria of 10 mg/L. Similar to the water sampled in the vadose zone, nitrate concentrations present in the soil matrix is likely to be the result of fertilizers added to produce corn, rather than nitrogen generated by the addition of TKN in the wastewater.

Table 5: Soil Sampling -- May 2003

Analyte	Depth (ft)		
	0 - 1	1 - 2	2 - 3
Conductivity (μ mho/cm)	380	220	228
pH (Standard)	7.9	8.4	8.6
Nitrate-N (mg N/kg)	33	18	17
Ammonia-N (mg N/kg)	7	3	2
Potassium (mg/kg)	350	181	120
Phosphorous (mg/kg)	70	17	10

SEPA COMPLIANCE

A determination of non-significance was issued on May 11, 1995 for the proposed construction and operation of the Watts Brothers Frozen Foods facility. The responsible agency was the Benton County Planning and Building Department.

PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be either technology- or water quality-based. Wastewater must be treated using all known, available, and reasonable methods of prevention, control and treatment (AKART) and not pollute the waters of the State. The minimum requirements to demonstrate compliance with the AKART standard is required to be determined by the Permittee during the upcoming permit cycle. Results shall be given in an updated Engineering Report, in conformance with Guidelines for the Preparation of Engineering Reports for Industrial Wastewater Land Application Systems, May 1993.

Although the permit requires the submittal of an Engineering Report based on a land application wastewater treatment system, an Engineering Report that develops treatment alternatives other than land application may be acceptable to the Department. Any alternative wastewater treatment system proposed by the Permittee is required to meet the AKART standard.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring AKART for discharges to waters of the State (WAC 173-216-110).

The 1995 White Shield Engineering Report recommended that wastewater be treated by irrigated application to land that had successfully grown crops for many years. The wastewater would be mixed with irrigation water from the Columbia River and applied at agronomic rates. Analysis of the 2003 data given above in the Vadose Zone Characterization section of this fact sheet indicates that the presumptive treatment of wastewater did not turn out to be protective of ground water quality. Therefore, AKART for this facility is required to be established in an updated Engineering Report (S6).

It is the judgment of the Department that the following wastewater constituents pose a threat to ground water quality: Total Dissolved Solids, TKN (and other nitrogen constituents), and Soluble BOD. The Soluble BOD has the potential to create anaerobic conditions leading specifically to the mobilization of iron and other metals. These concerns are demonstrated by lysimeter monitoring conducted in 2003, the results of which are given in Table 3 of this fact sheet. Levels of the above listed contaminants are well above Washington State Groundwater Standards. It is clear that the assumptions contained in the 1995 Engineering Report and the Updated 1999 Sprayfield Management Plan did not accurately model the conditions of operation and application of wastewater to land to sufficiently protect groundwater quality. Therefore, the Permittee is required to submit a new Engineering Report that includes a ground water quality evaluation. An AKART analysis with special attention to pollution prevention, and a re-evaluation of the potential for groundwater contamination under the sprayfields are essential issues to address in the Engineering Report.

The Permittee is required to land apply process wastewater generated by the vegetable processing facility in accordance with provisions given in the Operating and Maintenance Manual subsection entitled the Sprayfield Management Appendices (S4.B).

The permit requires the submittal of a new Engineering Report that utilizes operational knowledge gained since the start-up of the operation in 1997. The report shall be prepared according to requirements detailed in Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems (May 1993; Ecology Publication #93-36). This document is to be submitted to the Department at a date approximately in the middle of the permit cycle. The report is required to develop AKART for the treatment of vegetable processing wastewater. The Engineering Report shall include a determination of the following three sprayfield operating parameters:

- Sprayfield operating limitations;
- Hydraulic, nutrient and pollutant loading limits for the sprayfield;
- Monitoring requirements that demonstrate protection of ground water.

These parameters are required to be included in an updated O&M manual, Sprayfield Management Appendices A, B, and C.

The report is also required to identify significant pollution prevention opportunities at the facility.

GROUND WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's ground waters including the protection of human health, WAC 173-200-100 states that waste discharge permits shall be conditioned in such a manner as to authorize only activities that will not cause violations of the Ground Water Quality Standards. Drinking water is the beneficial use generally requiring the highest quality of ground water. Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial uses.

Applicable ground water criteria as defined in Chapter 173-200 WAC and in RCW 90.48.520 for this discharge include the following:

Table 6: Ground Water Quality Criteria

Parameter	Criterion
Total Coliform Bacteria	1 Colony / 100 mL
Total Dissolved Solids	500 mg/L
Chloride	250 mg/L
Sulfate	250 mg/L
Nitrate	10 mg/L
pH	6.5 to 8.5 standard units
Manganese	0.05 mg/L
Total Iron	0.3 mg/L
Toxics	No toxics in toxic amounts

The Department has reviewed existing records and is unable to determine if background ground water quality is either higher or lower than the criteria given in Chapter 173-200 WAC; therefore, the Department will use the criteria expressed in the regulation in this permit. The discharges authorized by this permit are not expected to interfere with beneficial uses. Vadose zone monitoring is a means of providing early detection of migrating contaminants before they reach ground water. Vadose zone contamination will almost always precede ground water contamination. The Ground Water Quality Standards do not regulate water in the vadose zone. However, vadose zone monitoring can still be used as an alternative point of compliance when ground water monitoring is not feasible. The Permittee's sprayfields overlies extensive

beds of fractured basalt. The depth to static ground water in the Permittee's water well is 108 feet below the surface (information from well log). Therefore, this permit proposes that the point of compliance (for the interim tech-based permit limits) to meet ground water quality standards shall be the vadose zone. The Ground Water Quality Evaluation (S7) shall determine the point of compliance for the final tech-based limits.

TOTAL DISSOLVED SOLIDS

Vadose zone sampling conducted in 2003 indicates that the wastewater discharge to the sprayfield may be resulting in an exceedance of State Ground Water Quality Criteria for Total Dissolved Solids. Since TDS is not amenable to treatment by land application, reduction at the processing source is the only viable option for reducing this pollutant. The Engineering Report (S6.D) requires the Permittee to address TDS through pollution prevention techniques.

NITRATE

Vadose zone sampling conducted in 2003 indicates concentrations of nitrate in the lysimeters are in exceedance of State Ground Water Quality Criteria for nitrate. The wastewater discharge to the sprayfields may be partially responsible for the nitrate exceedances. However, the effect of nitrogen fertilizer added to the soil for purposes of raising a robust corn crop can not be discounted as a factor in these exceedances. The Engineering Report shall account for all nitrogen loading to the sprayfield and consider less nitrogen dependent crops to treat the wastewater.

TOTAL IRON

Vadose zone sampling conducted in 2003 has revealed concentrations of ferrous iron in the sprayfield in exceedance of State Ground Water Quality Criteria for total iron. Since ferrous iron is a portion of the constituents found in total iron, it may be an indication that State Ground Water Quality Criteria are being exceeded.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, that ground water criteria are not violated, and that effluent limitations are being achieved (WAC 173-216-110). The Permittee shall be required to prepare a Sampling and Analysis Plan for project monitoring (S2.G). The plan is required to be submitted to the Department, prior to the 2004's wastewater sprayfield application, in order to prepare for that season's monitoring.

WASTEWATER MONITORING

The monitoring schedules are required to be detailed in the Operating and Maintenance Manual Appendix C (S2.B). Monitoring during 2004 is required be conducted according to the provisions given in the Sampling and Analysis Plan (S2.G). The annual review and/or revision of the O&M manual will determine if any modifications to this schedule after the 2004 season are required. Monitoring protocols, procedures, and schedules also appear in the Engineering Report. Specified monitoring frequencies will take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

The Permittee's wastewater is blended with river water at two separate locations. The initial dilution occurs at the pump basin adjacent to the processing building, which is upstream from the A-Cluster wastewater sampling port. The permit requires the submittal of an Engineering Report that will include detailed procedures to ensure representative monitoring of wastewater flows (S6). The monitoring requirements of the permit require submittal of irrigation scheduling records to ascertain the loading of pollutants to the sprayfield (S7.B).

VADOSE ZONE MONITORING

Sprayfields will be managed to ensure that soil moisture remains between field capacity and wilting point. Two lysimeters will be utilized in each sprayfield to sample and evaluate the quality of the soil water on a monthly basis. Monitoring during 2004 shall be conducted according to the provisions given in the Sampling and Analysis Plan (S2.G).

GROUND WATER MONITORING

The monitoring of ground water at the site is required in accordance with the Ground Water Quality Standards, Chapter 173-200 WAC. The Department has determined that this discharge has a potential to pollute the ground water. Therefore, the Permittee is required to evaluate the impacts on ground water quality. Monitoring during 2004 shall be conducted according to the provisions given in the Sampling and Analysis Plan (S2.G).

The permit requires submittal of a Ground Water Quality Evaluation (Hydrogeologic Study) as a portion of the Engineering Report. The evaluation may recommend installation of additional monitoring wells, in order to meet the AKART standard.

ANNUAL SOIL MONITORING

It is the Department's best professional judgment that soil sampling at the beginning of the irrigation season is a minimal requirement to characterize of nutrients and salts in the soil column. Soil monitoring during 2004 shall be conducted according to the provisions given in the Sampling and Analysis Plan (S2.G).

CROP MONITORING

Crop monitoring during 2004 shall be conducted according to the provisions given in the Sampling and Analysis Plan (S2.G).

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-216-110).

ENGINEERING REPORT FOR WASTEWATER TREATMENT

The permit (S6.) requires the submittal of an Engineering Report that develops AKART for the treatment of vegetable processing wastewater.

If the Engineering Report determines that land treatment of the wastewater is the preferred option, the report is required to detail any appropriate requirements as described in "Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems" (Washington State Department of Ecology, 1993). The report is required to include hydraulic, pollutant, and nutrient loading limits for the sprayfields. The report is also required to identify significant pollution prevention opportunities at the facility.

The elements of the Engineering Report development and timeline for submittal of its contents are as follows:

- 1) 90 days after the effective date of the permit - Scope of Work for the Engineering Report
- 2) One year after the effective date of the permit - Progress Report which is required to detail the development of the Engineering Report.
- 3) One year after the effective date of the permit - Ground Water Quality Evaluation section of the Engineering Report
- 4) Two years after the effective date of the permit - Final Engineering Report

The Engineering Report is required to include a Ground Water Quality Evaluation (Hydrogeologic Study) (S6.E) in accordance with WAC 173-200-080. The hydrogeologic study will be based on soil and hydrogeologic characteristics and be capable of assessing impacts on ground water. The study will be prepared using "Implementation Guidance for the Ground Water Quality Standards (Ecology Publ. No. 96-02)".

A section of the Engineering Report is required to provide protocols and procedures so as to meet the requirements of Special Condition S2.F - Sampling and Analytical Procedures, and S2.G - Flow Measurement.

Two copies of the Engineering Report are required to be prepared by the Permittee in accordance with Chapter 173-240 WAC and submitted to the Department for review and approval. The final report is required to be submitted two years after the effective date of the permit.

OPERATIONS AND MAINTENANCE

This permit contains Special Condition S4., as authorized under WAC 173-240-150 and WAC 173-216-110. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

In the spring of 2004, a revised O&M Manual is required to be submitted to the Department. This manual is to consist of a revision to the Updated Sprayfield Management Plan (prepared for Watts Brothers by Tetra Tech, 1999). Sampling and analysis in this revision is required to be conducted according to the requirements given in the Sampling and Analysis Plan (S2.G). In 2005, a new O&M Manual is required to be submitted to the Department (one year after the effective date of the permit). Annual review and/or updates to the O&M Manual are required to be submitted to the Department in subsequent years.

The O&M manual is required to contain a section entitled the Sprayfield Management Plan with the following appendices:

Appendix A: Land Application Processes and Procedures

Appendix A of the Sprayfield Management section of the O&M manual is required to include the specifics of land application processes and procedures. Also, Appendix A is required to include best management practices that ensure protection of ground water quality.

Appendix B: Wastewater and Hydraulic Loading Limitations

The total hydraulic limit of wastewater applied to the irrigation lands is required to not exceed crop requirements. The loading rates and pollutant loading rates for 2004 growing season are given in S4.B, Appendix B - Wastewater and Hydraulic Loading Limitations of the permit.

Appendix C: Monitoring Requirements

Appendix C of the Sprayfield Management section of the O&M manual is required to include the specifics and schedules of wastewater, vadose zone, ground water, soil, and crop monitoring. The Sprayfield Management Plan is required to be reviewed annually and any changes are to be submitted to the Department annually by February 15th for review and approval.

Table 7 lists Department approvable wastewater monitoring requirements to be set forth in the 2004 update to Appendix C of the Sprayfield Management section of the O&M manual.

Table 7: Wastewater Monitoring Requirements

Parameter	Units	Sample Point	Sampling Frequency	Sample Type
Flow (Wastewater Pipe)	MG	a	Continuous	Cumulative from 1 st of month
Flow (River water pipe to pump basin)	MG	b	Continuous	Cumulative from 1 st of month
Flow (cumulative flow to each sprayfield)	MG	c	Continuous	Cumulative from 1 st of month
Flow (flow to each sprayfield)	MGD	Not Applicable	monthly	Calculation
Sprayfield Irrigation Scheduling	Minutes	d	Continuous	Cumulative from 1 st of month
Flow (Wastewater Pipe to Sprayfield 5) ^a	MG	e	Continuous	Cumulative from 1 st of month
Total BOD ₅	mg/L	f	Weekly	Grab
Total BOD ₅	lbs/day	Not Applicable	monthly	Calculation
Soluble BOD ₅	mg/L	f	Weekly	Grab
Soluble BOD ₅	lbs/day	Not Applicable	monthly	Calculation
Total Suspended Solids (TSS)	mg/L	f	Weekly	Grab
Total Suspended Solids (TSS)	lbs/day	Not Applicable	monthly	Calculation
Total Dissolved Solids (TDS)	mg/L	f	Weekly	Grab
Total Dissolved Solids (TDS)	lbs/day	Not Applicable	monthly	Calculation

Parameter	Units	Sample Point	Sampling Frequency	Sample Type
Fixed Dissolved Solids (FDS)	mg/L	f	Weekly	Grab
Specific Conductance	mho/cm @ 25° C	f	Weekly	Grab
pH	Standard Units	f	Weekly	Grab
Total Kjeldahl Nitrogen (TKN, as N)	mg/L	f	Weekly	Grab
Total Kjeldahl Nitrogen (TKN, as N)	lbs/day	Not Applicable	monthly	Calculation
Nitrate	mg/L	f	Weekly	Grab
Chloride	mg/L	f	Weekly	Grab
Sodium	mg/L	f	Weekly	Grab
Sodium	lbs/day	Not Applicable	monthly	Calculation
^a Flow meter in wastewater/river water pipe located between filters and A-Cluster				
^b Flow meter in river water pipe into pump basin.				
^c Combination of metering and calculations				
^d Record minutes of actual center pivot operation each month.				
^e Flow meter in wastewater/river water pipe to sprayfield five				
^f Port on wastewater distribution pipe prior to A-Cluster valves				

Table 8 lists Department approvable vadose zone monitoring requirements to be set forth in the 2004 update to Appendix C of the Sprayfield Management section of the O&M manual.

Table 8: Vadose Zone Monitoring Requirements

Parameter	Units	Sample Point	Sampling Frequency ^a	Sample Type
TKN	mg/L	lysimeter	monthly	grab
TDS	mg/L	lysimeter	monthly	grab
FDS	mg/L	lysimeter	monthly	grab
Specific Conductance	mho/cm @ 25° C	lysimeter	monthly	grab
Sodium	mg/L	lysimeter	monthly	grab
Nitrate-N	mg/L	lysimeter	monthly	grab
Potassium	mg/L	lysimeter	monthly	grab
Ferrous Iron ^b (present/absent)	mg/L	lysimeter	monthly	grab

Parameter	Units	Sample Point	Sampling Frequency ^a	Sample Type
Sulfate	mg/L	lysimeter	monthly	grab
Chloride	mg/L	lysimeter	monthly	grab
Alkalinity	mg/L	lysimeter	monthly	grab
Total Phosphate	mg/L	lysimeter	monthly	grab
Calcium	mg/L	lysimeter	monthly	grab
Magnesium	mg/L	lysimeter	monthly	grab
Manganese	mg/L	lysimeter	monthly	grab
pH	Standard Units	lysimeter	monthly	grab
^a The Permittee shall monitor lysimeters during the 8 months of the growing season (March through October).				
^b If 2,2' diPyridyl test indicates present of Ferrous Iron, sample for Total Iron concentration at lab.				

Table 9 lists Department approvable ground water monitoring requirements to be set forth in the 2004 update to Appendix C of the Sprayfield Management section of the O&M manual. The sample location is required to be at the first available tap from the Permittee's facility water well.

Table 9: Ground Water Monitoring Requirements

Parameter	Units	Frequency ^a	Sample Type
Total Dissolved Solids	mg/L	Quarterly	Grab
Specific Conductance	mho/cm @ 25° C	Quarterly	Grab
Chloride	mg/L	Quarterly	Grab
Sulfate	mg/L	Quarterly	Grab
Nitrate	µg/L	Quarterly	Grab
Manganese	µg/L	Quarterly	Grab
Total Iron	µg/L	Quarterly	Grab
Static Elevation	feet	Quarterly	Record
^a November, February, May, and August monitoring results to be submitted in the following month's DMRs: December, March, June, September			

Table 10 lists Department approvable soil monitoring requirements to be set forth in the 2004 update to Appendix C of the Sprayfield Management section of the O&M manual.

Table 10: Soil Monitoring Requirements

Parameter	Units	Sample Type	Depth Increments ^{a, b}
Organic matter	%	Composite	1
TKN (as N)	mg/Kg	Composite	1
Cation exchange capacity	meq/100g	Composite	1 & 4
SO ₄	mg/Kg	Composite	1 & 4
Total Phosphorus (as P)	mg/Kg	Composite	1 & 4
Calcium	mg/ Kg	Composite	1 & 4
Magnesium	mg/ Kg	Composite	1 & 4
Sodium	mg/ Kg	Composite	1 & 4
Potassium	mg/Kg	Composite	1 & 4
pH	S. U.	Composite	1 & 4
Bicarbonate (HCO ₃)	mg/ Kg	Composite	1 & 4
NO ₃ (as N)	mg/Kg	Composite	1, 2, 3, 4
Chloride	mg/Kg	Composite	1, 2, 3, 4
Specific conductance	mho/cm @ 25° C	Composite	1, 2, 3, 4
^a Depth increments in inches: 1= 0 -12", 2 = 12-24", 3 = 24-36", 4 = 36-48"			
^b Samples shall be taken to the indicated depths, or until auger refusal.			

Table 11 lists Department approvable crop monitoring requirements to be set forth in the 2004 update to Appendix C of the Sprayfield Management section of the O&M manual.

The Permittee is required to perform crop monitoring on each field once per harvest. Composite samples will be comprised of at least ten (10) random samples collected from each center-pivot field. Results of the crop monitoring are required to be submitted to the Department in the January DMR.

Table 11: Crop Monitoring Requirements

Parameter	Units
Crop production	dry tons/ac
Moisture content	%
Total Kjeldahl Nitrogen	%
NO ₃ (as N)	mg/Kg (dry wt)

IRRIGATION AND CROP MANAGEMENT PLAN

The permit requires the annual submittal of an Irrigation and Crop Management Plan (S7) that sets forth the annual summary of farm operations for the previous year and cropping schedule for the upcoming year. The annual summary of the previous year's operations include soil, crop, and water balance operational details. The report is also required to provide details about the cropping schedule and irrigation management strategies for the coming year. The provision of these details is intended to assure the Department the land treatment system is operated in a manner that protects ground water quality.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the State from leachate of solid waste.

This permit requires, under authority of RCW 90.48.080, that the Permittee develop and submit to the Department a solid waste plan (S5.C) to prevent solid waste from causing pollution of waters of the State. The plan must also be submitted to the local solid waste permitting agency for approval, if required by local ordinance.

GENERAL CONDITIONS

General Conditions are based directly on State laws and regulations and have been standardized for all industrial waste discharge to ground water permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the payment of permit fees. Condition G10 describes the penalties for violating permit conditions.

RECOMMENDATION FOR PERMIT ISSUANCE

This permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, and to protect human health and the beneficial uses of waters of the State of Washington. The Department proposes that the permit be issued for **five** years.

REFERENCES FOR TEXT AND APPENDICES

Faulkner, S.P., Patrick Jr., W.H., Gambrell, R.P., May-June, 1989. Field Techniques for Measuring Wetland Soil Parameters, Soil Science Society of America Journal, Vol. 53, No.3.

Washington State Department of Ecology, 1993. Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems, Ecology Publication # 93-36. 20 pp.

Washington State Department of Ecology.

Laws and Regulations(<http://www.ecy.wa.gov/laws-rules/index.html>)

Permit and Wastewater Related Information

(<http://www.ecy.wa.gov/programs/wq/wastewater/index.html>)

Washington State Department of Ecology, 1996. Implementation Guidance for the Ground Water Quality Standards, Ecology Publication # 96-02.

Washington State University, November, 1981. Laboratory Procedures - Soil Testing Laboratory. 38 pp.

APPENDIX A -- PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on July 24, 2002 in the Tri-City Herald to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department published a Public Notice of Draft (PNOD) on February 18, 2004 in the Prosser Record Bulletin to inform the public that a draft permit and fact sheet were available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Washington State Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, WA 98902

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, 509/457-7105, or by writing to the address listed above.

This permit was written by Jim Leier.

APPENDIX B -- GLOSSARY

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation--The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the Federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of the collection or treatment facility.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the eighty (85) percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring--Uninterrupted, unless otherwise noted in the permit.

Distribution Uniformity--The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

Engineering Report--A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Soil Scientist--An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of thirty (30) semester hours or forty-five (45) quarter hours professional core courses in agronomy, crops or soils, and have five (5), three (3), or one (1) year(s), respectively, of professional experience working in the area of agronomy, crops, or soils.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the State of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria--A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids--That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent pollution of the receiving water.

APPENDIX C -- RESPONSE TO COMMENTS

The Department (Ecology) received the following comments from the Benton-Franklin Health District regarding the proposed permit and fact sheet. Ecology has provided clarifying remarks enclosed in brackets.

[Comment #1 is directed to the fact sheet's section entitled Summary Of Compliance With The Previous Permit, on page # 8, the 5th paragraph on the page.]

Comment #1:

“These statements read that the only time Watt’s Brothers are sampling is when they are attempting to renew their permit. The permits have required routine sampling which they are [sic] not completed. Haven’t they therefore been in violation of the previous permits? Should this behavior be overlooked with continual renewal of their permit without being subject to noncompliance conditions?”

Ecology’s Response:

Until the present date, Watts Brothers has been discharging its wastewater to ground under the auspice of a State temporary wastewater discharge permit. With the issuance of permanent State Wastewater Discharge permit, the facility will be in the State’s enforcement database, which is not the case while discharging with a temporary permit. Any incident of non-compliance with the terms of the discharge permit will result in a prompt notice of non-compliance by the Department, as well as possible formal enforcement actions.

[Comment #2 is directed to the fact sheet’s section entitled Vadose Zone Characterization, on page # 11, the paragraph below Table 3.]

Comment #2:

“The high nitrogen results MAY be accounted for from the use a fertilizers with the organically grown corn fields. Should this assumption be evaluated?”

Ecology’s Response:

The proposed permit regulates the discharge of wastewater to ground. The Department has no regulatory mandate to limit fertilizers utilized in agricultural practices.

[Comment #3 is directed to the fact sheet's section entitled Technology-Based Effluent Limitations, on page # 13, the 3rd paragraph on the page.]

Comment #3:

"The final Engineering Report is not due until 2 years after the date of issuance on the permit. Watt's Brothers has already had 9 years to accurately model the conditions of operation and the application of wastewater. At this time it should be obvious that the conditions of operation and application of wastewater to the land is not sufficiently protecting groundwater and a new plan of operation or system needs to be established before renewal of this permit. Although it addresses an implementation of AKART, it does not seem address the problem of wastewater discharges with parameters above what was previous stipulated as acceptable."

Ecology's Response:

A Department approvable Engineering Report which is required to develop AKART for the company's wastewater discharge is necessarily a document which cannot be produced on a short time scale. The document is required to examine in detail, all known and reasonable treatments for the company's wastewater. Therefore, it is the Department's position that 2 years is not an unreasonable timeframe to produce an Engineering Report.

.....

The Department (Ecology) has received the following comments from the Watts Brother's authorized representative, Freer Consulting, regarding the proposed permit and fact sheet. Ecology's has provided clarifying remarks enclosed in brackets.

[The first comment is directed towards the permit's section entitled S4.B Operation and Maintenance, O&M Manual, on page # 13, specifically the Pollutant and Nutrient Loading Limits Per Sprayfield table.]

Comment #1:

"We believe the pollutant and nutrient loading limits proposed by Ecology are within the realm of possibilities for WBFF given their present levels of water use if the following points are factored in appropriately to the permit. First, our loadings calculations upon which the limits are based are different due to using different values for sprayfield acreage and pollutant sampling. Our acreage data is more accurate than the data used to calculate loadings in the draft permit. The acreage includes the following: circle 1 (125); circle 3 (125); circle 4 (125); circle 5 (125); circle 8 (90); and circle 9 (95). Additionally, in some cases where the values for certain pollutants were recorded as <2.0, we calculated our numbers using the more conservative 2.0, whereas Ecology used 0.1 in most cases. Ecology should use 2.0."

Ecology's Response:

The Department will revise the Pollutant and Nutrient Loading Limits and the Hydraulic Loading Limitations given in the tables on the permit's page 13, based on the more accurate acreage given above.

[These comments are directed to the fact sheet's section entitled Sprayfield Distribution System, on pages # 6 & 7]

Comment #2:

“We are proposing changes to the *Sprayfield Distribution System* section of the fact sheet to correct factual errors (i.e. that “wastewater is further blended with river water at an approximate 1 to 7 ratio”) and to provide a more accurate description of the system in general (see the attached rewrite).” [The attached rewrite is entered below.]

Sprayfield Distribution Section (rewrite)

REPLACE PARAGRAPHS 1-3, & 7 WITH THOSE NUMBERED 1-4, & 7 BELOW.

1. The sprayfield distribution system irrigates six crop circles (numbered 1, 3, 4, 5, 8 & 9) totaling 685 acres with water taken from the Columbia River and process wastewater from the frozen foods facility. The primary distribution point, the A-Cluster valve system, is located about ½-mile northwest of the facility and distributes river and waste water to five sprayfields (1, 3, 4, 8 & 9). Sprayfield 5 receives river or wastewater separately from A-Cluster.
2. Process wastewater, after initial treatment, is sent to A-Cluster but may be diverted to Sprayfield 5, which lies upstream of A-Cluster. Wastewater must pass through a final set of pressure filters, designed to prevent clogging of the sprinkler emitters, before reaching either Sprayfield 5 or A-Cluster.
3. At A-Cluster, pressure regulators and irrigation demands control whether river water or wastewater is sent to the sprayfields. Due to the vicissitudes of the flash freezing process used by the facility, the concentration of the wastewater stream varies depending on the stage of freezer cycling and plant operations.
4. The process wastewater sprayfields are managed through a computer based irrigation scheduling program. Daily irrigation needs are determined from projected evapo-transpiration, based on a Paterson, WA weather station. At least one field is covered by a neutron probe-based irrigation scheduling service which provides a check on irrigation management.

7. A limited amount of wastewater is occasionally diverted to Emergency Sprayfields immediately adjacent to the facility or to a pond located approximately ¼ mile west of the facility. The pond is currently supporting a community of wetland plants and animals. A section of the hydrogeologic report (S7) shall examine if the pond is protective of the State's ground water quality.

Ecology's Response:

The Department accepts the revised language given above as an accurate portrayal the Sprayfield Distribution System. State regulations prohibit changes to the fact sheet after the public notice date of the proposed permit.

[This comment is directed to the permit's Submittal Table on page # 4 of the permit, and specifically towards the Irrigation and Crop Management Plan (S7), with a proposed first submittal date of May 30th, 2004. Watts Brothers is proposing a June 15th, 2004 submittal date.]

Comment #3:

"We are proposing that one report submittal date be revised to grant sufficient time for completion (see the attached chart with proposed date highlighted in green)."

Ecology's Response:

The Department accepts the proposal to extend the submittal date for the Irrigation and Crop Management Plan by fifteen days. The revised permit will show June 15th, 2004 as the required date for this plan.